



Emergency Services Consulting International

Providing Expertise and Guidance that Enhances Community Safety

Service Delivery and Station Location Study

American Fork Fire Department

May, 2017

Lane Wintermute

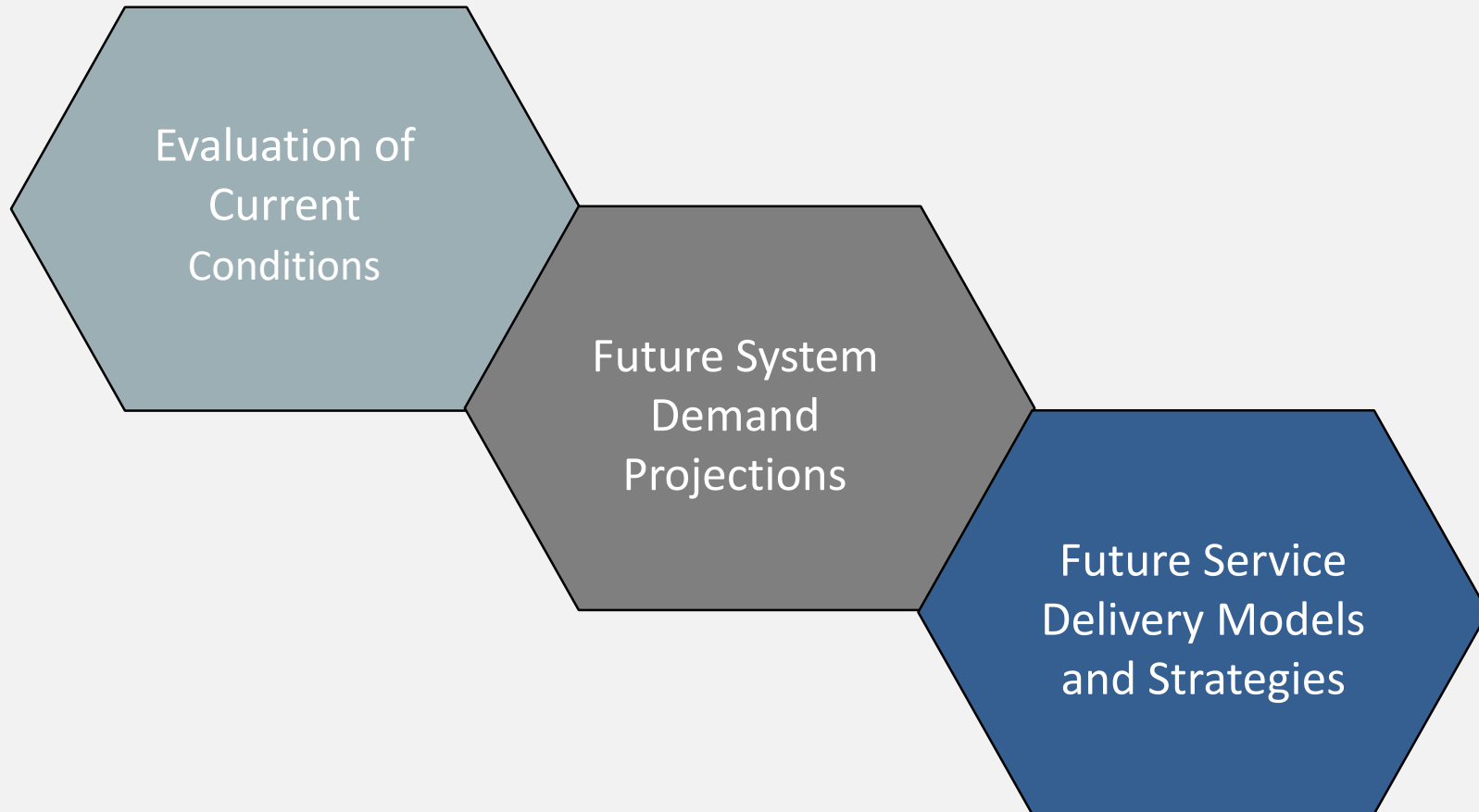
Western Regional Director, ESCI

Study Purpose

- Assess current service delivery and infrastructure conditions and provide comparisons to industry standards and best practices where applicable
- Project future growth and forecast service effects
- Identify and evaluate future system delivery system needs, focusing on current and future fire station locations



The Process



Report Sections

- **Evaluation of Current Conditions**
 - Overview of the Organization
 - Service Delivery and Response Performance Analysis
 - Review of Capital Assets and Replacement Plans
- **Future System Demand Projections**
 - Population Growth Projections
- **Future Delivery System Models**
 - Long Term Strategies
 - Findings and Recommendations



Section I: Evaluation of Current Conditions

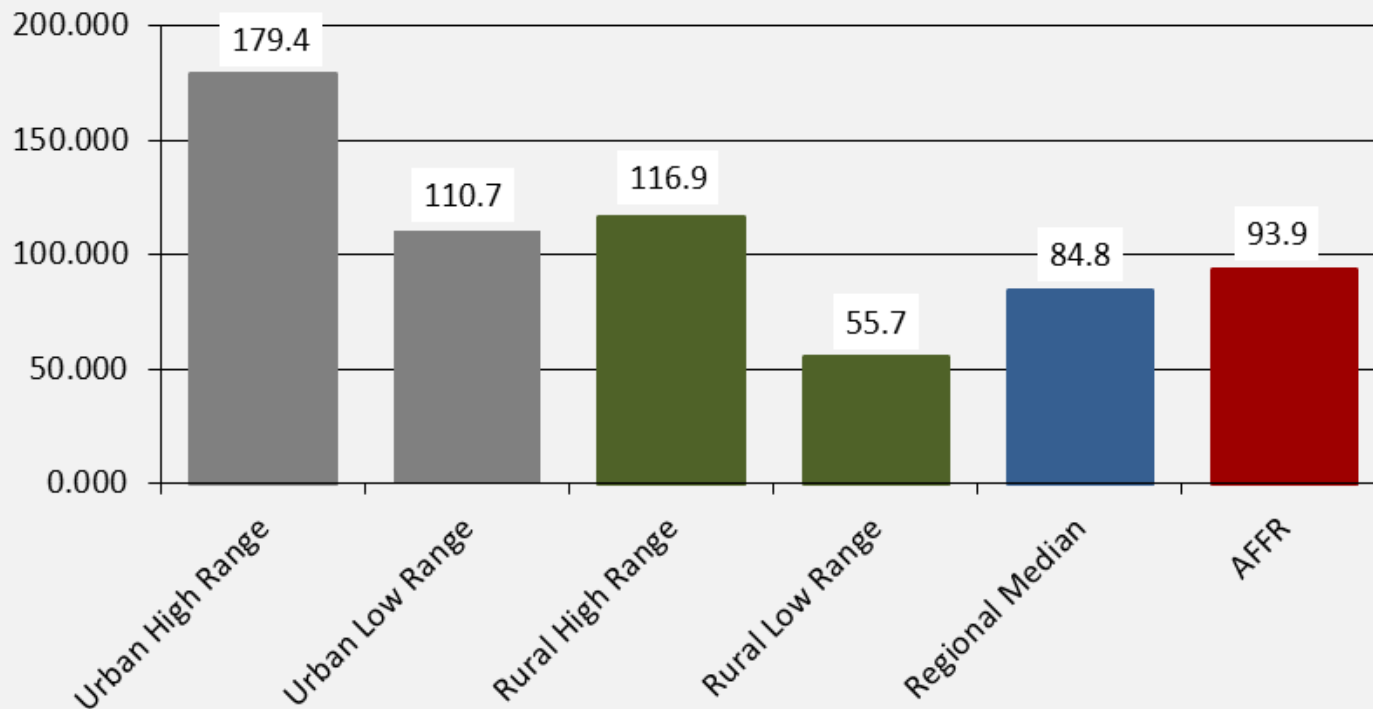
- **Organization Overview**
 - Governance and Lines of Authority
 - Organizational Design
 - Service Delivery Infrastructure
 - Response Types and Frequency
 - Emergency Response Staffing
- **Capital Assets and Capital Improvement Programs**
- **Service Delivery and Performance Analysis**



Section I: Evaluation of Current Conditions

Emergency Response Types and Frequency

- 2,718 annual incidents
 - 86.7 percent EMS calls

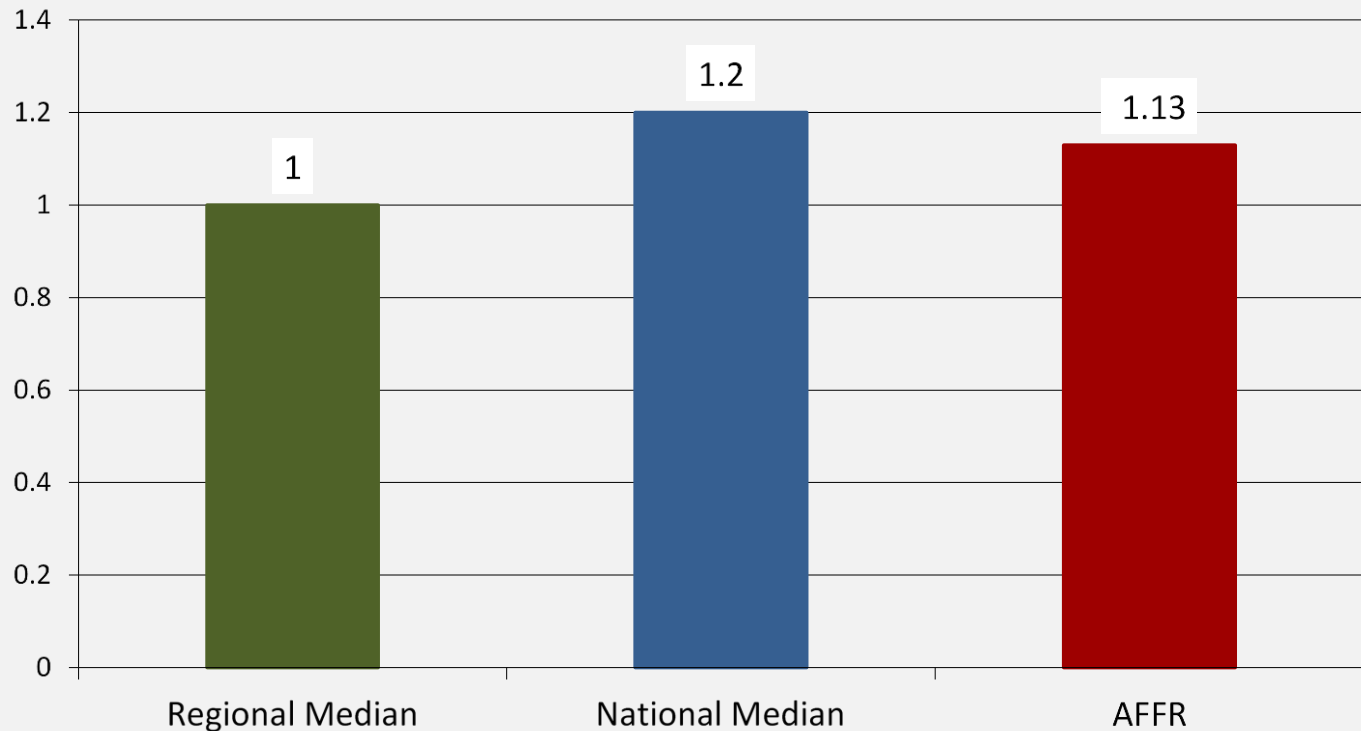


Evaluation of Current Conditions

- **Emergency Response Staffing**

- 24 full time personnel
- 24 part time personnel
- 8 on duty each day, if at full staffing

Comparison of Operational Personnel—Career

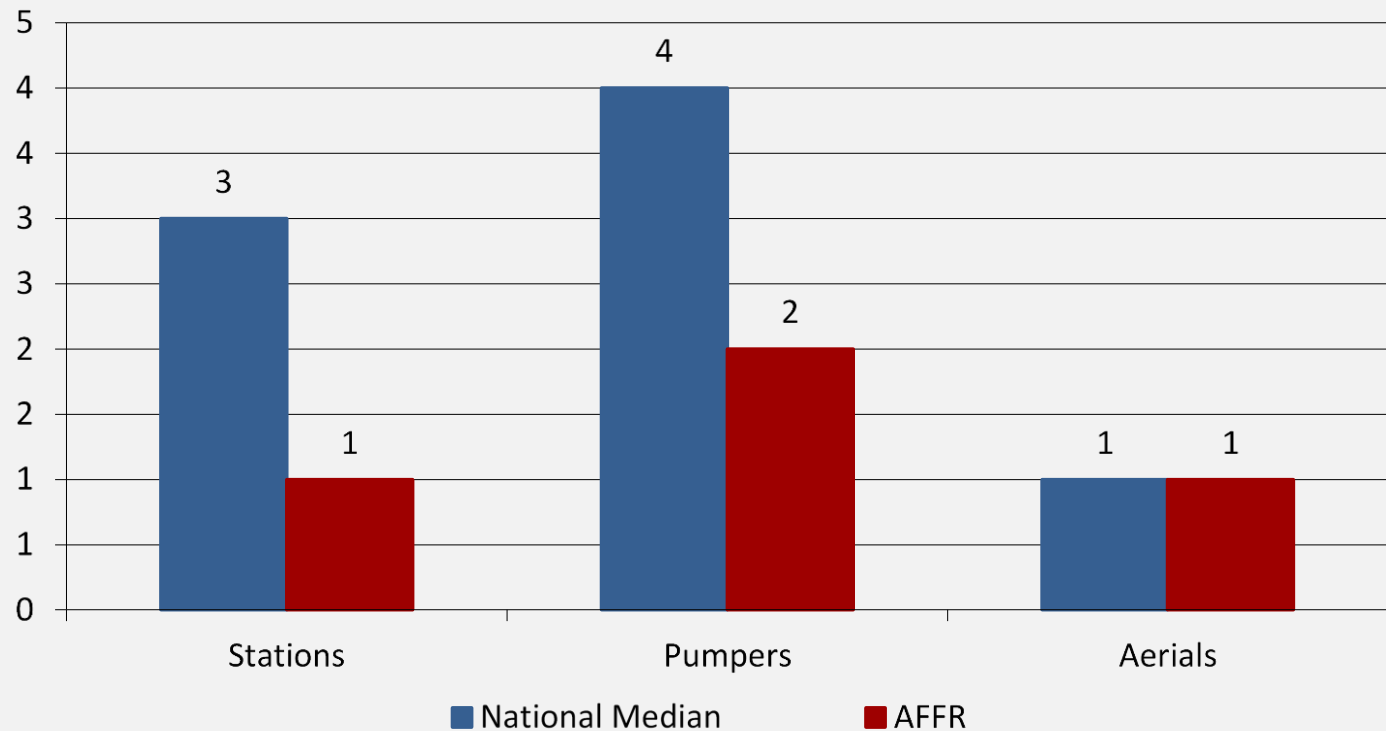


Evaluation of Current Conditions

- **Capital Assets**

- One fire station
- 2 Fire Engines (Pumpers)
- 1 Aerial Ladder Truck
- 4 Ambulances

Capital Assets per 1,000 Population



Service Delivery Analysis

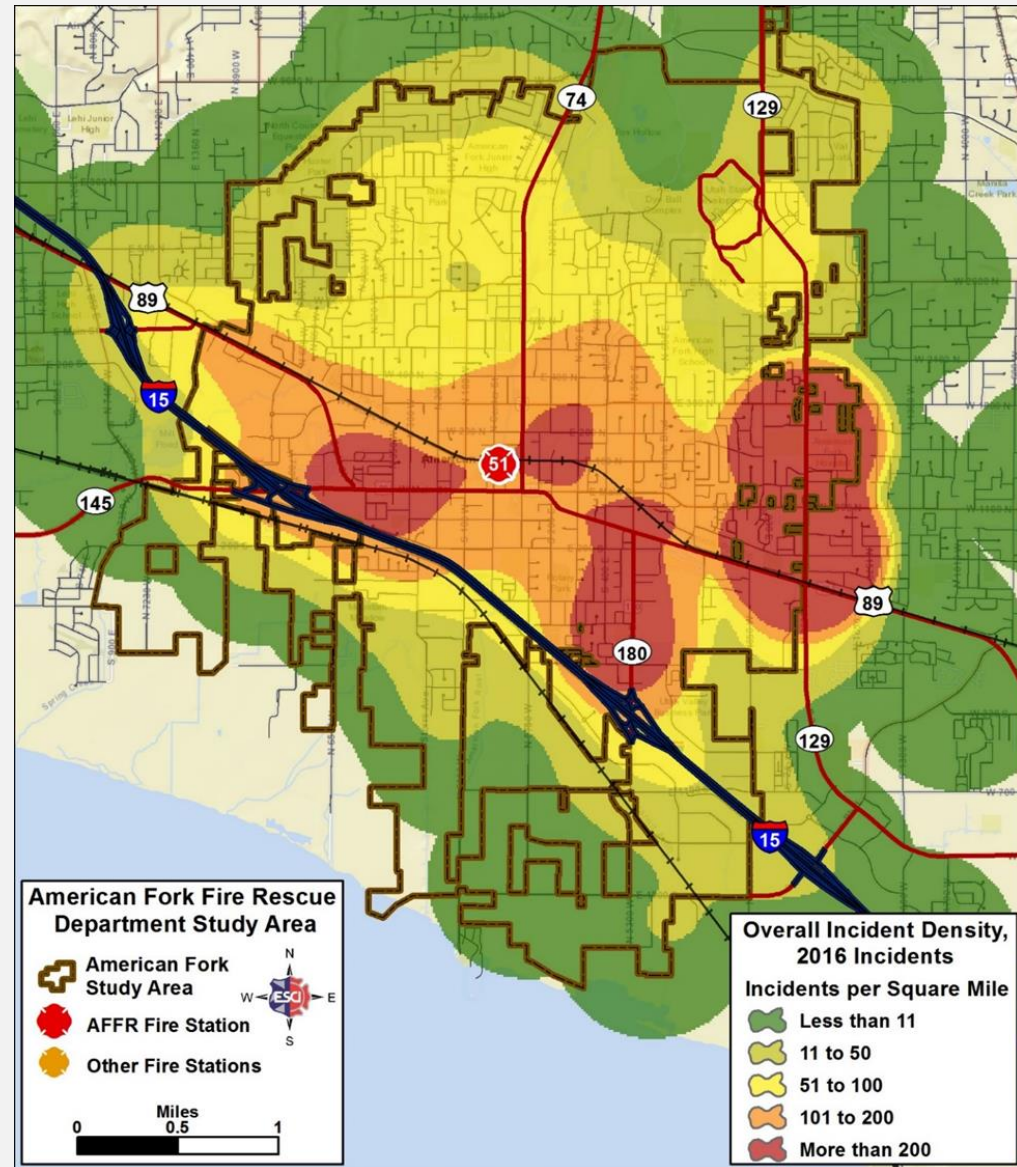
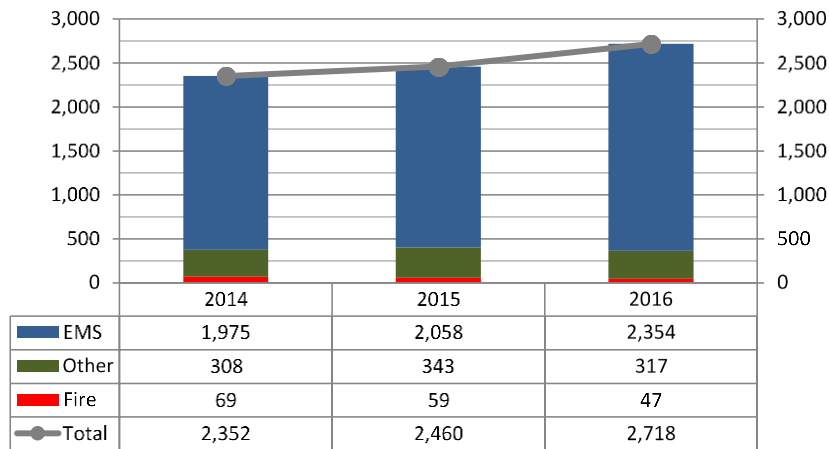
- Service Delivery and Performance
 - Service Demand
 - Resource Distribution
 - Response Reliability
 - Response Performance



Service Delivery Analysis

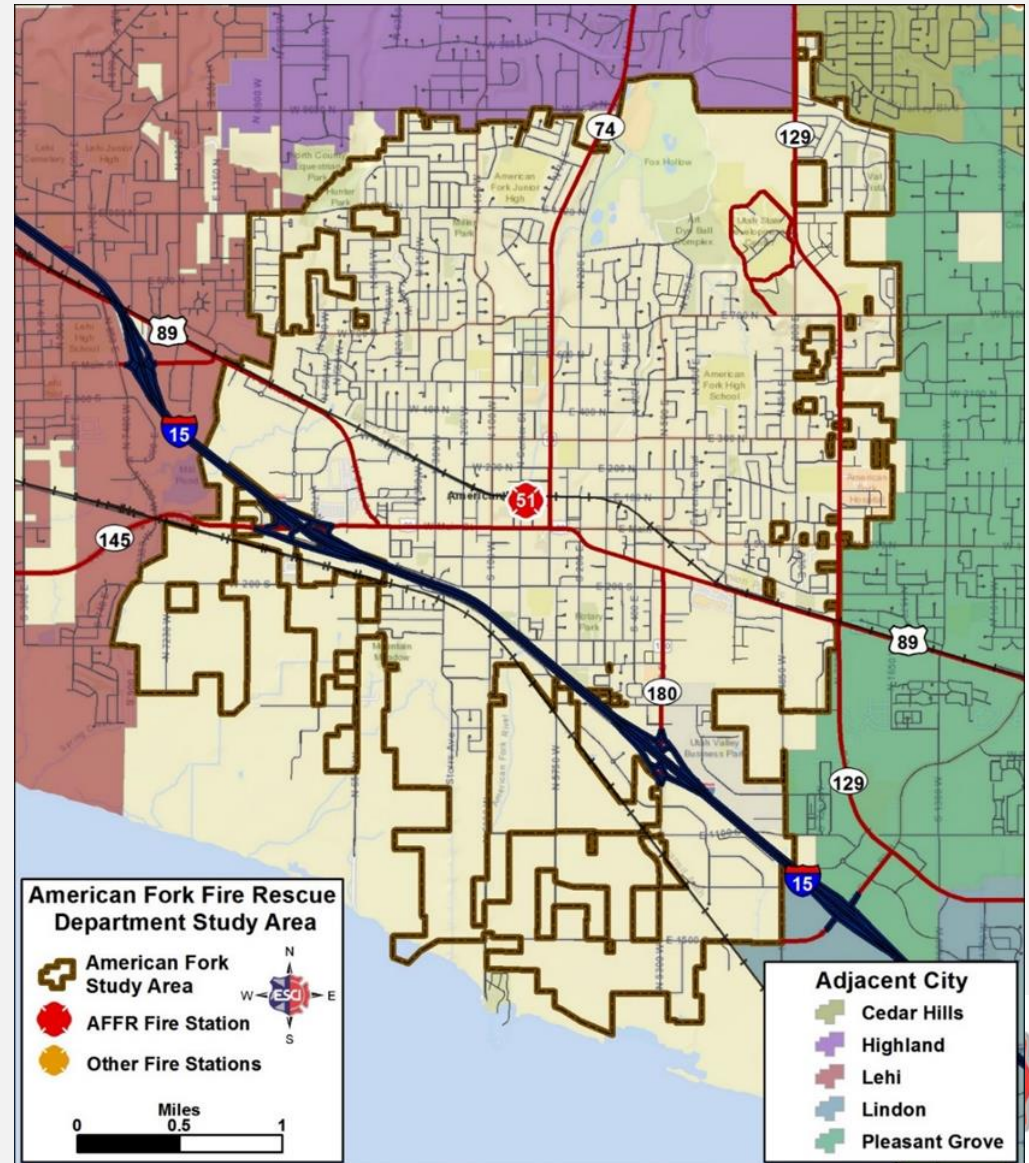
- Service Demand

: AFFR Service Demand, 2014 through 2016



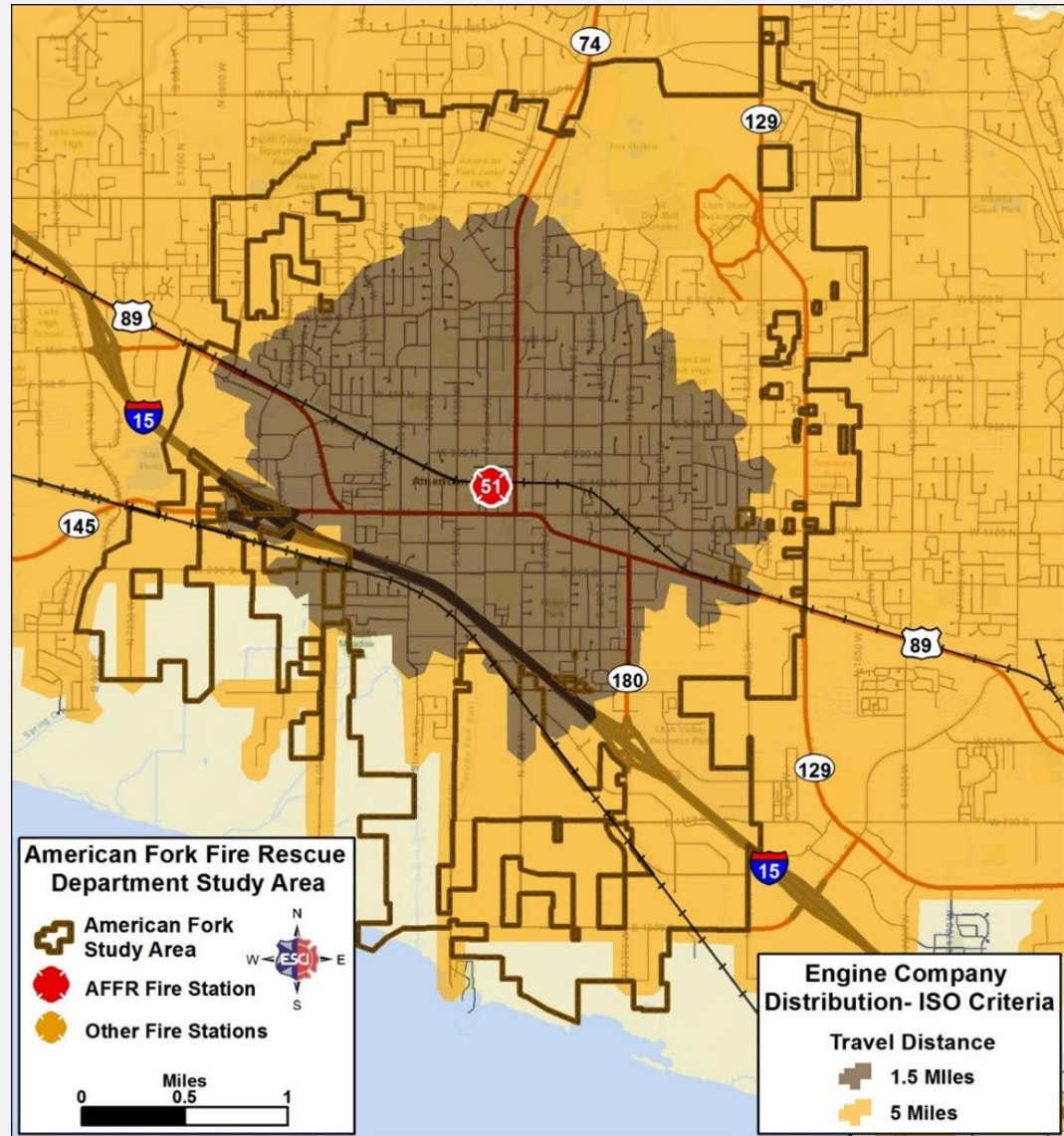
Service Delivery Analysis

- Resource Distribution



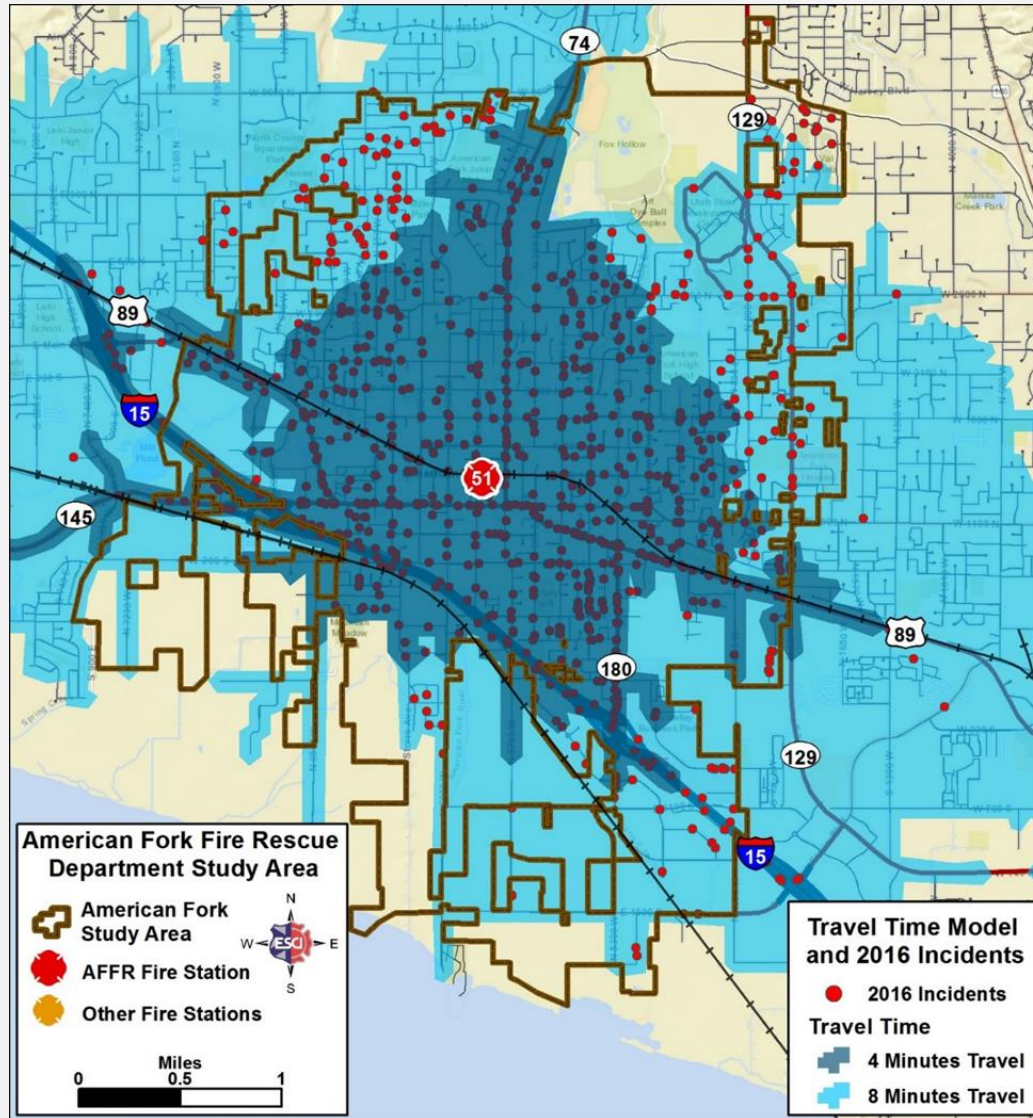
Service Delivery Analysis

- Station Distribution – ISO Criteria



Service Delivery Analysis

- Travel Time - 4 and 8 Minutes



Service Delivery Analysis

- Response Performance

NFPA 1710 Response Performance Guidelines

Response Element	NFPA Recommendation
Call Processing	60 Seconds @ 90 th Percentile
Turnout Time	60 Seconds @ 90 th Percentile for EMS 80 Seconds @ 90 th Percentile for Fire
Travel Time (First unit on scene-Fire or EMS)	4 Minutes @ 90 th Percentile
Travel Time-Full First Alarm (Fire Suppression Incident)	8 Minutes @ 90 th Percentile
Travel Time-First ALS unit on scene – EMS Incident	

AFFR Performance—Components of Response Time (First Unit On-Scene), Fiscal Year 2016

	Turnout Time	Travel Time	Response Time (Dispatched to On-Scene)
Average	01:58	04:49	06:47
90th Percentile	03:06	07:02	09:17



Report Section II: Future System Demand Projections

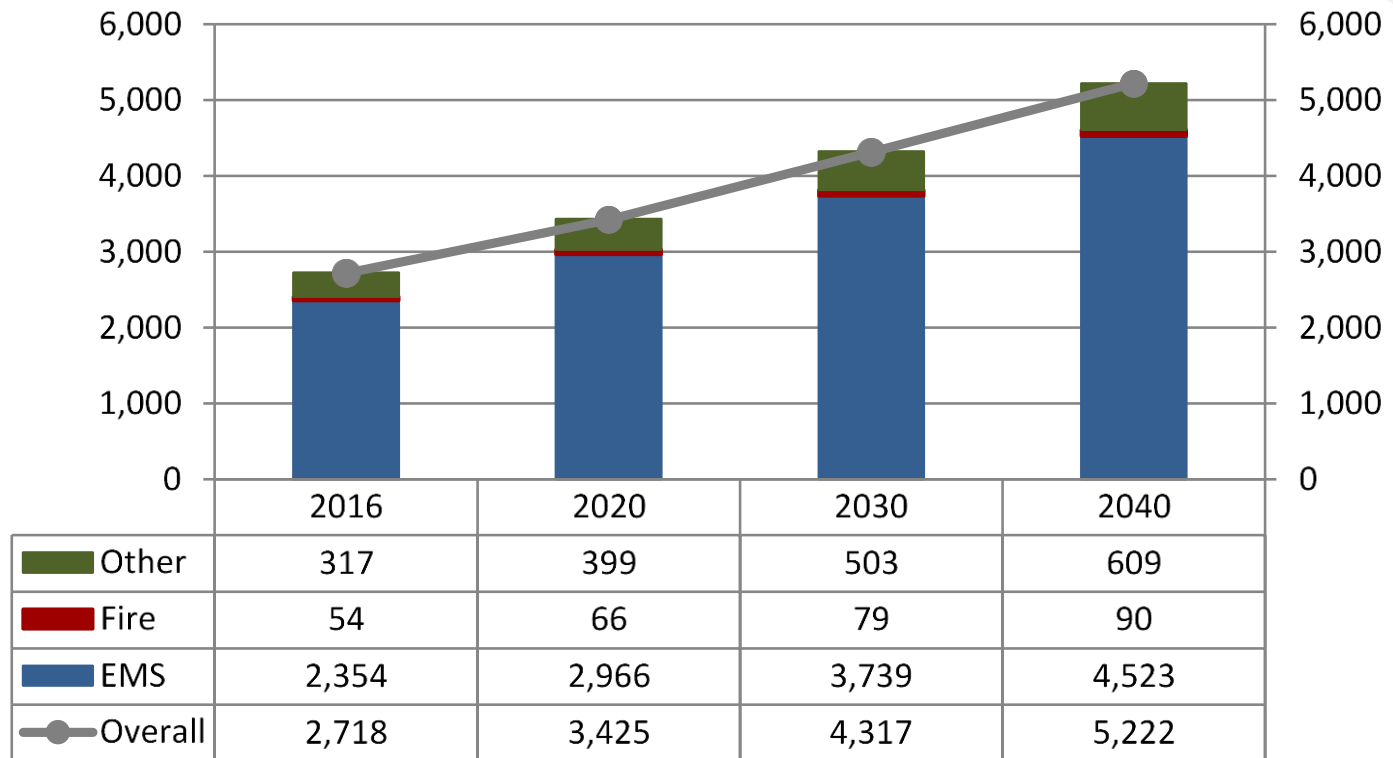
- Population History
- Population Projections
- Service Demand Projections



Future System Demand Projections

- Population and Workload Growth Projections

AFFR Service Demand Projection, 2016–2040



By 2040:

Population – 47,678

Responses – 5,222

Future Service Delivery Models

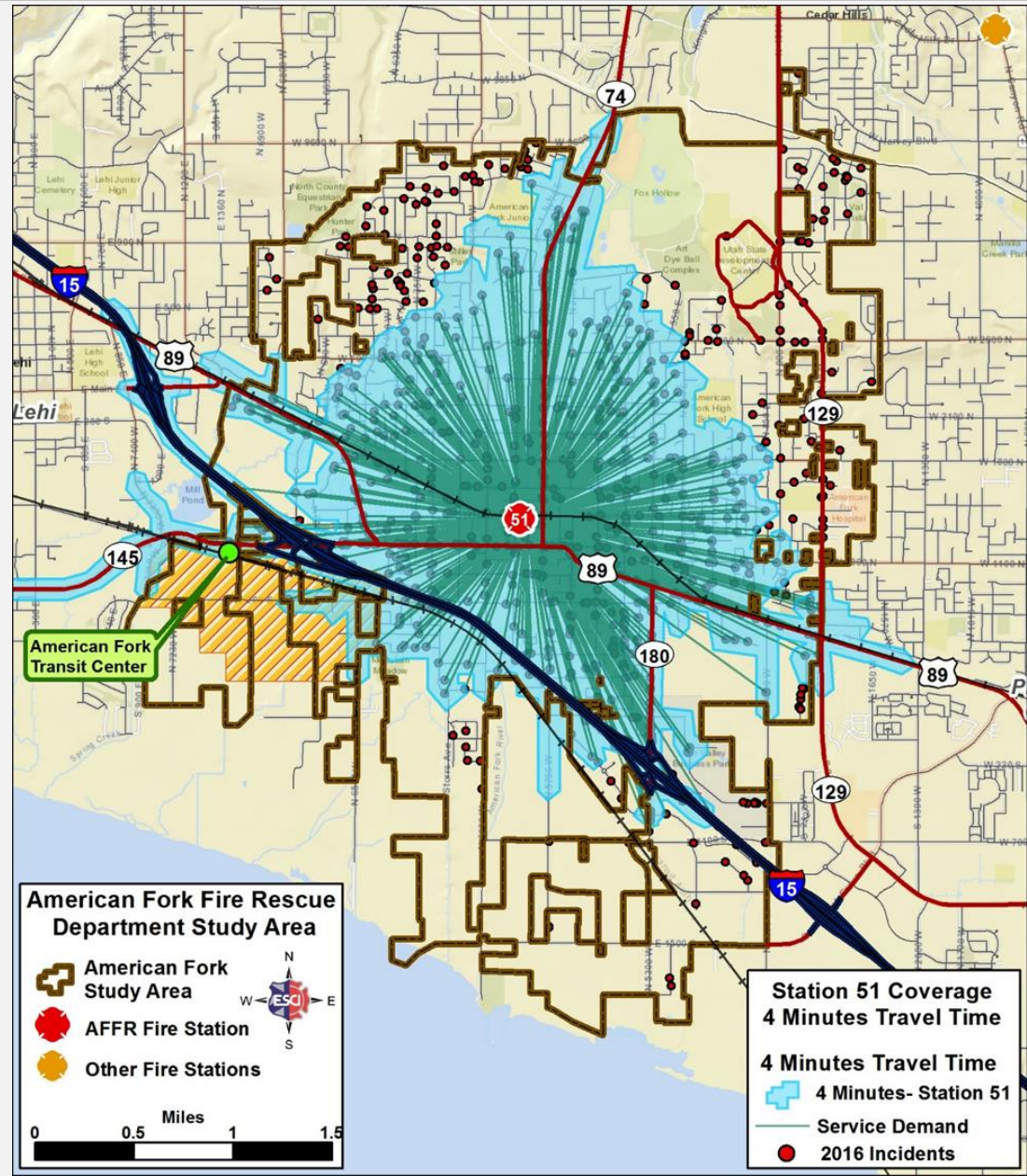
Apparatus Replacement Planning:

- Fire Apparatus is on a replacement schedule
- ESCI recommends a replacement plan/schedule for
 - Fixed facilities
 - Support equipment



Future Service Delivery Models

Current Station Location



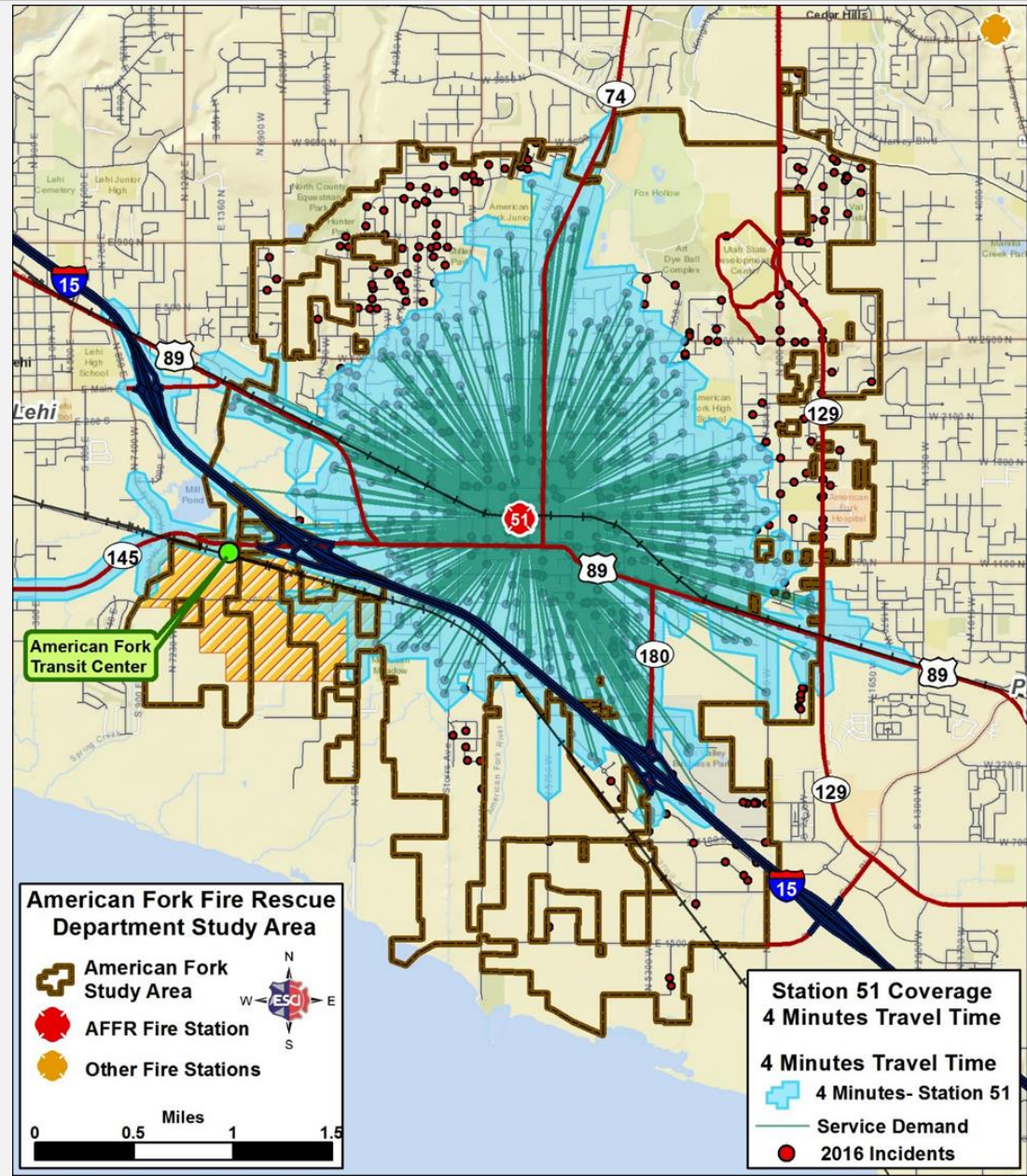
Future Service Delivery Models

Current Station Location

70 % of service demand occurred is within 4 minutes travel or less of Station 51

Actual travel time to reach 90 % incidents was 7 minutes, 2 seconds.

NFPA 1710 goal is 4 minutes travel to 90 % of incidents. Currently achieving 44%



Future Service Delivery Models

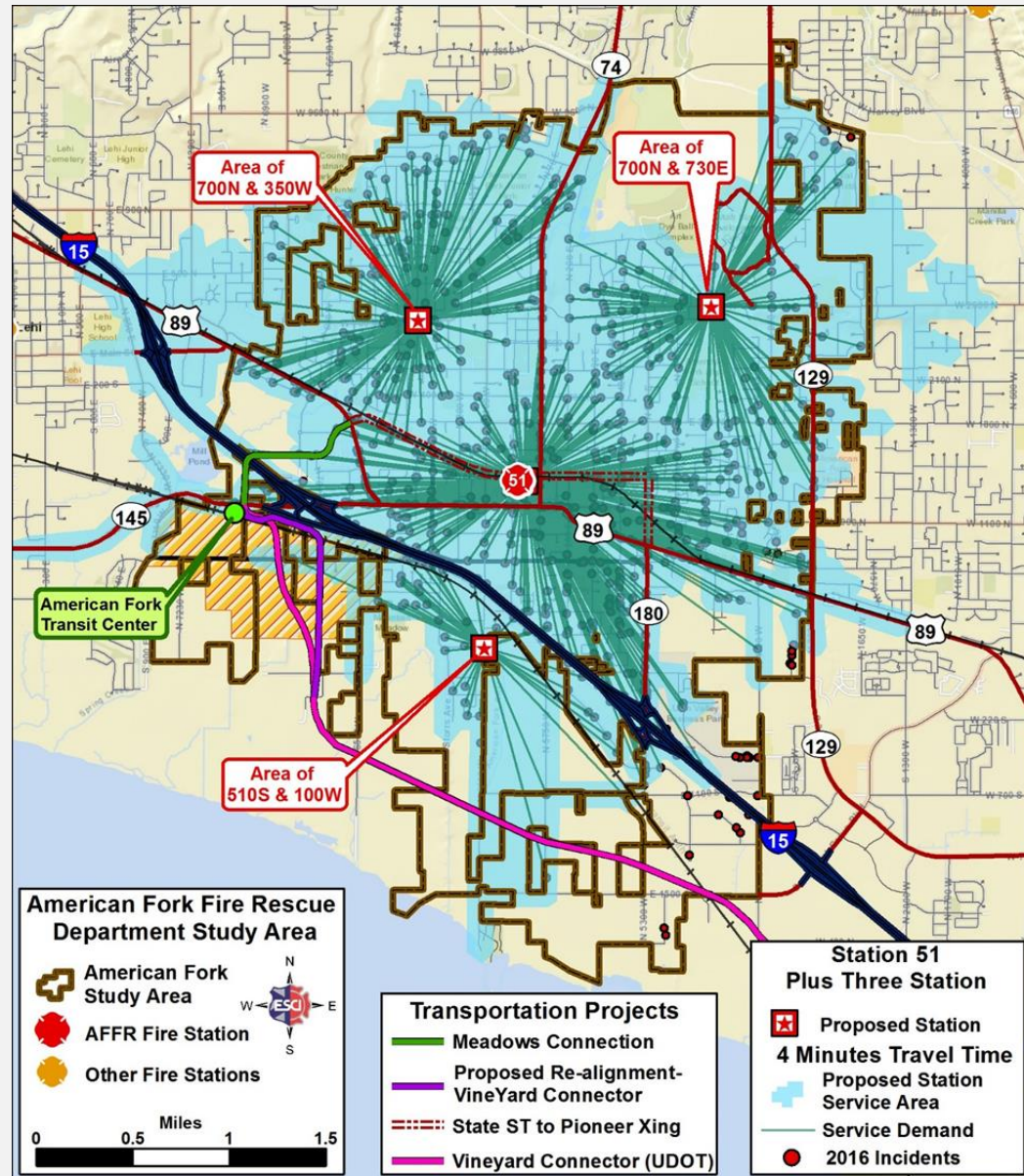
Adding Three Stations

Provides coverage to South of I-15

Provides 97% coverage in 4 minutes

Improves coverage for the area of future development

Is advantageous, but not an immediate need



Discussion



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